

Notice of Allowability**Application No.**

10/554,383

Applicant(s)

VRANKEN ET AL.

Examiner

DANIEL F. MCMAHON

Art Unit

2117

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 03/09/09.
2. ☒ The allowed claim(s) is/are 1-9,13,15,17 and 19-21(now renumbered 1 - 15).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 04222009.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/John P Trimmings/
Primary Examiner, Art Unit 2117

DETAILED ACTION
EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Robert Crawford on April 22, 2009.

The claims are amended as follows:

As per claim 1:

A method of compressing data that includes a sequence of ~~at least two~~ subsequent vectors, the ~~at least two~~ subsequent vectors each having one or more bits including care bits and don't care bits, the method comprising the steps of:

comparing corresponding bits of the ~~two or more~~ subsequent vectors to determine if they are compatible; and

responsive to determining that, for a number of said ~~two or more~~ vectors, all corresponding bits of the number of vectors are compatible,

filling in the don't care bits of the number of vectors using a random fill process when the number of vectors is less than a number n,

filling in the don't care bits of the number of vectors using a non-random fill process when the number of vectors is greater than or equal to the number n, and

merging the number of vectors to create a single merged vector representative thereof.

As per claim 2:

A method according to claim 1, further comprising reconstructing the care bits of the number of vectors from the single merged vector, wherein said data comprises test vector data for use in testing a logic product, and the method includes generating or obtaining original test vector data.

As per claim 4:

A method according to claim 2, further comprising the step of generating a repeat value in respect of one or more merged vectors, said repeat value being indicative of a number of times the respective a merged vector should be created repeated to reconstruct the care bits in the vectors of which the merged vector is representative.

As per claim 6:

A method of testing a logic product, the method comprising the steps of generating compressed test vector data according to claim 5, reconstructing the test vector data by repeating the merged vector one or more times according to their

~~respective the~~ repeat value[s], and applying said reconstructed test vector data to an input of said logic product and obtaining t-he resultant output data.

As per claim 20:

A method according to claim 19, wherein the merged vectors are arranged in a sequence of merged vector sets, each merged vector set having a first merged vector and a last merged vector, the method further comprising ordering the merged vector sets so that the last merged vector of one merged vector set is compatible with the first merged vector of a ~~the~~ subsequent merged vector set.

Reasons for Allowance

2. The following is an examiner's statement of reasons for allowance:

The present invention includes a method of compressing data that includes a sequence of at least two subsequent vectors, the at least two subsequent vectors each having one or more bits including care bits and don't care bits.

The claimed invention recites features such as: "...filling in the don't care bits of the number of vectors using a random fill process when the number of vectors is less than a number n filling in the don't care bits of the number of vectors using a non-random fill process when the number of vectors is greater than or equal to the number n"

The prior arts of record (Venkataraman et al. (herein Venkataraman), "An Efficient Bist Scheme Based On Reseeding Of Multiple Polynomial Linear Feedback Shift Register", and Distler et al. (herein Distler), U.S. Publication 2002/0099992 as examples of such prior arts) do not teach the same method.

Venkataraman teaches: A method of compressing data comprising a sequence of at least two subsequent vectors; wherein a vector comprises one or more bits including care bits and don't care bits.

Distler teaches: filling don't care bits with a random fill algorithm, or a repeat fill algorithm.

However, the prior art of record fails to teach: using a random fill process when the number of vectors is less than a number n and using a non-random fill process when the number of vectors is greater than or equal to the number n .

Claims 1 – 9, 13, 15, and 17, 19 - 21 are allowable over the prior arts of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL F. MCMAHON whose telephone number is (571)270-3232. The examiner can normally be reached on M-Th 8am-5pm(EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (571) 272-3645. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.